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FINAL TECHNICAL REPORT

GRANT NUMBER: AFOSR 90-0219

PURPOSE OF GRANT: Asian Toxicology Conference

REPORT PREPARED BY: Louis W. Chang, Ph.D.

REPORT:

The objective of this project was to organize a delegation of toxicologists from the United States of America to take a toxicology conference tour in Asia in hope to foster scientific interactions and future collaborations in the area of toxicology between the scientists in USA and those in Asia.

This conference tour began on June 10, 1990 and ended on July 4, 1990. Within this three week period, the delegation, in selected member-groups, had visited and made presentations in Japan, Taiwan, Hong Kong, and Korea. The delegation members participated in this project are as follows:

Dr. Louis W. Chang
University of Arkansas for Medical Sciences

Dr. I.K. Ho
University of Mississippi Medical Center

Ms. Chih C. Wang
Arkansas Department of Human Services

Dr. Dennis Hsieh
University of California, Davis

Dr. Anna A.M. Fan
California Department of Health Services

Dr. Peter P.K. Chan
Rohm and Hass Company

Dr. Horace Loh
University of Minnesota

Dr. Stephan M.T. Hsia
Mitre Corporation

Dr. Basil Leong
The Upjohn Company

Dr. Po-Chuen Chan
National Institute of Environmental Health Sciences

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Dr. William T. Allaben
National Center for Toxicological Research
Dr. William Slikker
National Center for Toxicological Research
Dr. T. Jan Cerverny, Lt. Col.
Air Force Office of Scientific Research

The countries, organizations, and institutes that had been visited are as follows:

The National Institute for Environmental Studies
Japan Environment Agency
Tsukuba, Japan

Japan Society of Toxicological Sciences
Japan

Nagoya University School of Medicine
Nagoya, Japan

National Taiwan University College of Medicine
Taipei, Taiwan

Chang-Gung Medical College
Tao-Yuan, Taiwan

Taiwan Agricultural Chemicals and Toxic Substances Research Institute
Taichung, Taiwan

The Chinese University of Hong Kong
Shatin, Hong Kong

Korea Institute of Science and Technology
Seoul, Korea

A total seven formal scientific conferences were conducted with 44 presentations given by various members of the delegation. The topics and titles of these presentations at each conference are listed in separate pages of this report (see enclosed).

RESULTS OF THE CONFERENCE TOUR:

This toxicology conference tour was an emensely successful one. It was jointly supported by AFOSR, private industry, private donations, and by the hosting countries. The selection of the delegation included both Americans and Asian-Americans from academia, private sectors and industries, as well

as from state and federal agencies. This broad spectrum of delegation allowed us to interact and respond to the individual host countries in a more dynamic manner. Our visits were warmly received by each hosting country and our presentations were highly respected and had induced enthusiastic responses from the audiences.

From our presentations, publications were generated from those given in Japan, Taiwan, and Korea (see enclosed volume from Japan and a reprint from Korea). Since our conference tour, Dr. Louis W. Chang and Dr. I.K. Ho had been invited to return to Hong Kong for a post-conference meeting with faculties at the Chinese University of Hong Kong in October, 1990, Dr. Anna Fan was invited to participate in an Environmental Toxicology Workshop in Taipei in December, 1990, Dr. Peter Chan was invited to organize a Toxicology Symposium for the Taiwan EPA in March, 1991, and Dr. Louis W. Chang has revisited Taipei this June as a result of a scientific collaboration between his laboratory and those in Chang-Gung Medical College and in the General VA Hospital of Taipei. As a result of these conferences, Dr. Louis W. Chang has also revisited Hong Kong and Kaohsiung, Taiwan this July with Dr. Billy Chou in the attempt to develop further interactions with scientists in these areas.

Our conference tour has also stimulated awareness and appreciation of toxicology and environmental health in many of the Asian countries. As a result, a student was sent to the University of Arkansas for Medical Sciences for Toxicology training from Korea. Other students were also attracted to the Toxicology programs in United States via the assistances of our delegation members. Stimulation of research interactions and collaborations, as well as future educational interests in Toxicology are part of the goals of our project. We believe that we have accomplished this goal very well.

As a result of our interactions with the Asian countries, the following issues and activities are being organized for the coming years:

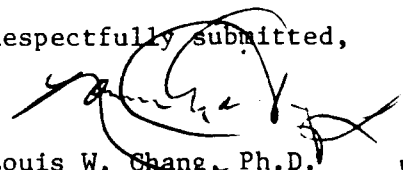
1. Further research interaction with the General VA Hospital of Taipei on Clinical Toxicology; a conference is set for January, 1992;
2. A Toxicology Symposium will be established in Singapore for June, 1992;

3. A Workshop on Neurotoxicology is being planned for June, 1992 to be held in Taipei, Taiwan;
4. A Workshop on Experimental Models for Clinical Toxicity is being planned for December, 1992, to be held in Taipei, Taiwan;
5. Dr. Basil Leong has been invited to hold a Workshop on Inhalation Toxicology in November, 1991 at the Taiwan Agricultural Chemical & Toxic Substances Research Institute in Taichung, Taiwan;
5. An International Symposium & Workshop on Toxicology is being planned for April, 1993 to be held in Taiwan;
6. An Collaborative Program in Toxicology is being established between the University of Arkansas for Medical Sciences and Kaohsiung Medical College in Taiwan;
7. A China/NCTR Joint Toxicology Conference is being considered and neogotiated.

In sum, this Asian Toxicology Conference Tour has sucessfully induced enthusiastic responses and active interactions between the American and Asian toxicologists and health care agencies. Educational and technological transfers and opportunities were made available to those countries which need the awareness and trainings in toxicological sciences. The American scientists also gained first hand information on many of the unique toxicological problems in Asia (e.g. "black-foot disease", toxicities of oriental medicinal herbs, industrial and occupational toxicological problems and managements, etc.) Much human exposure data on various toxic chemicals were also available for clinical/experimental correlations. Thus, the sucess of this project has provided mutual benefits to the American scientists as well as to the Asian countries.

It must also be mentioned that as a result of this Asian Conference Tour, the major Asian countries, including Japan, Korea, Taiwan, China, and India, are now interested in the possibility of forming a Federation of Asian Toxicologists to continue such scientific exchange and interaction among the Asian countries. Dr. Louis W. Chang, leader of the Asian Toxicology Conference Tour, has initiated this concept and will serve a mediator to help the negotiation and final establishment of this meaningful organization.

Respectfully submitted,



Louis W. Chang, Ph.D.
Professor